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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,777	07/31/2003	Fong Shi	60000500.1008	7890

7590 08/25/2004
Jean C. Edwards
SONNENSCHN NATH & ROSENTHAL
P.O. Box 061080
Wacker Drive Station
Chicago, IL 60606-1080

EXAMINER

POTTER, ROY KARL

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/630,777	Applicant(s) SHI, FONG	
	Examiner Roy K Potter	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 15 and 22 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 5-14, 16-21, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/3/03</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 15, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Gates Jr. et al., U.S. Patent No. 5685071.

Gates, Jr. et al. discloses a sealed chip-on board electronic module comprising a substrate, printed wiring board 32, shown in Figure 1. A semiconductor device 33 is mounted on the printed wiring board 32. A passivation layer 37 covers the semiconductor device 33. A sealant 38 is deposited on the passivation layer 37. In column 3, line 40, Gates Jr. et al. discloses that the passivation layer 37 is silicon nitride. As explained in column 3, line 15, a die attachment adhesive 34 is used to attach the semiconductor device to the printed wiring board.

Allowable Subject Matter

Claims 2 – 3, 5 – 14, 16 – 21, 23 – 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regard to claims 2, 3, and 20 - 21, Gates Jr. et al. does not disclose that the substrate is specifically a polyimide PWB. Or a direct bond copper substrate.

In regard to claims 5 – 6, and 23 – 24, the sealant 38 is not disclosed to be silicon-carbide.

In regard to claims 7 – 9, 11, and 16 - 18 Gates Jr. et al. does not disclose that the bond pads and wires on the semiconductor device are of aluminum.

In regard to claims 10 and 19, Gates Jr. et al. does not disclose that the semiconductor device is a power MOSFET.

In regard to claims 12 – 14, Gates Jr. et al. does not disclose that there is a conformal coating on the sealant layer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roy K Potter whose telephone number is 571 272 1842. The examiner can normally be reached on M-F.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roy K Potter
Primary Examiner
Art Unit 2822